



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

11-11

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,459	03/12/2004	Anthony J. Hadala	1286 Hadala	7698
7590 FORREST L. COLLINS POST OFFICE BOX 41040 BRECKSVILLE, OH 44141-0040		EXAMINER FRANK, RODNEY T		
		ART UNIT	PAPER NUMBER 2856	
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE		
3 MONTHS	12/27/2006	PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/799,459	HADALA, ANTHONY J.
	Examiner	Art Unit
	Rodney T. Frank	2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 13 September 2006.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-4,6-13 and 15-17 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-4,6-13 and 15-17 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 12 March 2004 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date: _____   | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

**EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

**In the Specification:**

- Please amend page 2, lines 1 through 6 as follows:

**Cross Reference to Related Application**

This application claims the benefit of copending United States patent application 09/992,610 filed 19 November 2001, now U.S. Patent Number 6,925,872, and United States patent application 09/792,663 filed February 23, 2001, now abandoned. United States patent applications 09/992,610 filed 19 November 2001 and 09/792,663 filed 23 February 2001 are specifically incorporated herein.

***Terminal Disclaimer***

2. The terminal disclaimer filed on 30 June 2006 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent Serial Number 6,925,872 has been reviewed and is accepted. The terminal disclaimer has been recorded.

3. The terminal disclaimer filed was based upon a needed to get around a rejection based upon a reference cited in the previous office action. Since that reference has been deemed not "by another", said rejection utilizing that reference has been withdrawn, and thus the terminal disclaimer is no longer necessary

***Priority***

4. This application repeats a substantial portion of prior Application No. 09/992,610, filed 19 November 2001, and adds and claims additional disclosure not presented in the prior application. Since this application names an inventor or inventors named in the prior application, it may constitute a continuation-in-part of the prior application. Should applicant desire to obtain the benefit of the filing date of the prior application, attention is directed to 35 U.S.C. 120 and 37 CFR 1.78. The applicant has mentioned this application in the first paragraph of the specification, and thus should be given benefit to this application. Further, 09/992, 610 was claiming benefit from copending application 09/792,663. The applicant mentions this application as well and thus should be given priority to that application as well.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-4, 6-12, and 15-17 are rejected under 35 U.S.C. 103(a) as being obvious over, Brown et al. (U.S. Patent Number 6,260,414; hereinafter referred to as

Art Unit: 2856

Brown) or Rait (U.S. Patent Number 4,358,955), or Gilmour (U.S. Patent Number 3,696,675) and further in view of Hof et al. (U.S. Patent Number 4,362,645; hereinafter referred to as Hof).

7. Brown discloses a cholesteric liquid crystal fluid level indicator that determines the level of a cooled liquid, such as beer, in a closed, opaque keg when placed in thermal contact with the exterior surface of the keg, by producing a color change that is a function of the liquid temperature when the liquid is within a predetermined temperature range, the indicator comprises a multiple level strip having a top transparent layer, liquid crystal layer, a black background layer and an attachment layer employing a protected adhesive on its bottom surface for removably attaching the strip to the keg, the instant invention employs a heat conducting adhesive on the attachment layer and for securing certain layers in the strip, such as the liquid crystal layer (Please see the abstract).

Rait discloses an apparatus for externally determining the level of a mass of flowable material such as liquid or granular material contained in a closed or sealed container having walls of magnetic material includes an elongate strip of thin magnetized metal sheet material coated with a thermochromic substance which varies chromatically with variations in temperature. The elongated strip is applied to the outer surface of the wall of the container in heat conducting relationship thereto by magnetic attraction and extends along the height of the container. The container is exposed to a temperature change either natural, such as that which occurs at sunset and sunrise, or artificially induced. Because of the difference in the rate of heat conduction of the void

Art Unit: 2856

volume and the filled space of the container, the container wall experiences a temperature gradient which is most pronounced at the interface of the contents and the void space. The temperature of the container wall changes abruptly at the surface of the contents. This change in temperature is readily discernible visually because of the abrupt change in color of the elongated strip at the material interface thus permitting an observer to readily detect the level of the contents of the container (Please see the abstract).

Gilmour discloses an apparatus and a method for externally determining the level of a mass of flowable material such as liquid or granular material contained in a closed or sealed container includes an elongated strip of material coated or imbedded with cholesteric liquid crystals which vary chromatically with variations in temperature. The elongated strip is applied to the outer surface of the wall of the container in heat conducting relationship thereto and extends along the height of the container. The container is exposed to a temperature change either natural, such as that which occurs at sunset and sunrise, artificially induced, such as dousing with water at a temperature different from the ambient temperature of the container or by energizing a heater element at the wall of the container adjacent the elongated strip. Because of the difference in the rate of heat conduction of the void volume and the filled space of the container, the container wall experiences a temperature gradient which is most pronounced at the interface of the contents. The temperature of the container wall changes abruptly at the surface of the contents. This change in temperature is readily discernible visually because of the abrupt change in color of the elongated strip at the

Art Unit: 2856

material interface thus permitting an observer to readily detect the level of the contents in the container (Please see the abstract).

8. In reference to claim 1, Brown, Rait, and Gilmour disclose all the limitations of the present claim 1 in as shown in claims 1 and 16 of Brown, claims 1-3 or Rait, and claims 11 and 12 of Gilmour, except for the limitation of claim 1 whereby the temperature measuring device operates at a single discrete temperature. However, Hof discloses a temperature indicating composition of matter that change color sharply upon transition from one state to another that can measure within a single discrete temperature. The motivation to combine the teaching of the references is that Hof would provide a more exact measurement of temperature sensing arrangement than that of the range systems disclosed in Brown, Rait, and Gilmour as the Hof reference is a type of temperature indicating composition that would be considered within the spirit of the Brown, Rait, and Gilmour inventions as disclosed in column 8, lines 38 through 51.

In reference to claims 2-4, and 10-11 since the device in Brown is described as a beer keg, and the containers in Gilmour and Rait can be broadly interpreted as a beer keg, the claim limitations would implicitly be met.

In reference to claim 6, claim 3 of Gilmour, Rait, and Brown all address how such a temperature measuring device can be attached to a container.

In reference to claim 7, Brown discloses, for example, beginning in column 5, with line 66 and concluding in column 6 with line 19 the placement of the temperature measuring devices along the keg. Rait clearly illustrates in figure 1 the placement of the sensor, as well as it's respective disclosure and description. Gilmour also clearly

illustrates in figure 1 the placement of the sensor, as well as it's respective disclosure and description.

In reference to claim 8, though the specific compositions may not be explicitly disclosed, the compositions are for a thermochromatic material, and the compositions are given as examples of suitable thermochromatic materials and not an inclusive list as the only choices, and thus the various compositions disclosed in Hof in column 9, would be functional equivalents for the compositions of the claim as they would operate as thermochromatic temperature sensing devices in a specific temperature range.

In reference to claim 9 Brown discloses in column 12, lines 38 through 40 that the container is in a refrigerator.

In reference to claim 12, the application of hot, warm, cooled, chilled, or cold water to read a thermochromatic device is well established in the art. Brown specifically acknowledges this fact in column 6, line 55 through column 7 line6, though Brown admits that at least one improvement is that pouring the water is not necessary. Rait also acknowledges such knowledge in the art in column 1, lines 23 through 32.

In reference to claim 15, the fluid dispensing assembly described in Brown, Rait, and Gilmour, Brown even specifically discloses the use of a keg as the container, which would meet the limitations placed on the sealed container of the present claim. Rait discloses the container in view of column 4 lines 53 through 68, and Gilmour discloses the container in column 6, lines 16 through 29.

In reference to claim 16, since the device is Brown is a beer keg, and the containers in either Rait or Gilmour could be a beer keg, the claim limitations would

implicitly be met or deemed obvious to one of ordinary skill in the art since a beer keg has a means of supplying carbon dioxide.

In reference to claim 17, though the specific compositions may not be explicitly disclosed, the compositions are for a thermochromatic material, and the compositions are given as examples of suitable thermochromatic materials and not an inclusive list as the only choices, and thus the various compositions disclosed in Hof in column 9, would be functional equivalents for the compositions of the claim as they would operate as thermochromatic temperature sensing devices in a specific temperature range.

***Response to Arguments***

9. Applicant's arguments with respect to claims 1-4, 6-13, and 15-17 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The examiner has cited various references deemed relevant to the general state of the art of the present invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney T. Frank whose telephone number is (571) 272-2193. The examiner can normally be reached on M-F 9-5:30 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron E. Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2856

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RTF  
December 16, 2006



DANIEL S. LARKIN  
PRIMARY EXAMINER